Message

From: Dunlap, David [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=591EB15A268249DDA0C05A7451F765C3-DUNLAP, DAV]
Sent: 10/23/2018 7:57:27 PM
To: Kevin Kuhn (Kuhn.Kevin@epa.gov) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=be20941b4c1144b8b3635e4df015924a-Kuhn, Kevin]
Subject: FW: Weekly Compass: October 23, 2018

Kevin,

Please put this call on my calendar. Maybe it will work, maybe not.

Thanks

DDD

ORD Hosts PFAS Call with States

On October 29, ORD will host the bimonthly ECOS-EPA PFAS call for EPA and state partners to share information on PFAS science and technical issues. Colorado Department of Public Health and Environment's Tracie White will present on PFAS site characterization. ORD's Craig Patterson will present on PFAS removal using household water treatment systems (Point-of-use (POU)/Point-of-entry (POE)), and Andy Gillespie will provide update on development of toxicity values for Gen-X and PFBS, followed by an open discussion.

From: EPAResearchCompass
Sent: Tuesday, October 23, 2018 3:42 PM
To: ORD-ALL Feds and NonFeds and RSLs <ORDALL_Feds_and_NonFeds_and_RSLs@epa.gov>
Cc: Lincoln, Larry <Lincoln.Larry@epa.gov>; Barnett, Felicia <Barnett.Felicia@epa.gov>; Carter, Bobbi <Carter.Bobbi@epa.gov>; Gettle, Jeaneanne <Gettle.Jeaneanne@epa.gov>; Taylor, Dawn <Taylor.Dawn@epa.gov>; Klinger, Adam <Klinger.Adam@epa.gov>; Liljegren, Jennifer <Liljegren.Jennifer@epa.gov>; Pollard, Solomon <Pollard.Solomon@epa.gov>; Clarage, Meredith <Clarage.Meredith@epa.gov>; Fan, Shirley <Fan.Shirley@epa.gov>; Peffers, Mel <Peffers.Mel@epa.gov>
Subject: Weekly Compass: October 23, 2018

WEEKLY compass

Weekly Update: 10/23/2018

Welcome to the Weekly Compass, your gateway to information about recent and upcoming ORD activities. If you have ideas for the Weekly Compass, please send them to the editors. To see past issues, visit the Weekly Compass archive on ORD@work.

Weekly Note from Jennifer
ORDers- Today, Chris Robbins will introduce the EPA Research Website and Science Inventory, a searchable catalog of all EPA's published research at the E-Enterprise National Meeting in Addison, TX. ORD recently updated the Science Inventory to make the information more user-friendly to states and other partners and stakeholders. ORD is seeking feedback from states on the content and accessibility of the information to best meet state needs. Take a moment to check out the updated Science Inventory site.

As I mentioned in my note yesterday, I join acting Administrator Wheeler in congratulating everyone in ORD for earning the coveted status of one of the "Administrator's Small Business Contracting Star Champions" for fiscal year 2018! ORD concluded the year by achieving four of the five small business contracting goals. I could not be more proud or grateful for your collective efforts to maximize small business contracting opportunities in carrying out the work of the agency. Again, thank you for making fiscal year 2018 such a successful small business contracting year for ORD. I look forward to what we can accomplish together in FY 2019. Keep up the good work! – *Jennifer*

Quick Updates

- In honor of National Lead Poisoning Prevention Week, EPA released "Protecting Children from Lead Exposures" to highlight some of the ongoing programs being worked on across the various program and regional offices.
- All FY 2018 PARS discussions and all FY 2019 PARS plans must be completed by Friday, November 2
- November 12 – December 10: Federal Benefits Open Season (Health, Dental/Vision, Flexible Spending)
- November 16: FY18 PARS ratings; signed, original FY18 PARS Plans; and LCO PARS certifications of completion due to OARS/HRD

- December 31: Mandatory manager/supervisor training must be completed
- Check out the EPA response page for Hurricane Michael for the latest updates.
- Don't forget to check out the open opportunities on Talent Hub!
- You can read the This Week @ EPA newsletter here.
- Upcoming webinars:
    - Sustainable Materials Management on Tribal Lands - Building and Abandoned Mobile Homes Deconstruction and Electronics Recycling: Wednesday, October 24, 2-3:30 ET
    - ORD & Cincinnati Hispanic Heritage Month Program: Thursday, October 25, 10:45 - 12 ET. In person: AWBERC RM 130/138. **VTC:** Conference Title: Hispanic Heritage Month Celebration, Conference Id 705109, Numeric Id 3568.
    - Computational Toxicology Communities of Practice: Chemical and Products Database: Thursday, October 25, 11-12 ET
    - Advanced Accessibility for PDFs: Thursday, October 25, 1-3 ET
    - ORD/OW Small Systems Webinar Series - PFAS: Tuesday, October 30, 2-4 ET
    - SHC Seminar Series: Understanding communities, values, and decisions through a study of Remediation to Restoration to Revitalization (R2R2R): Tuesday, October 30, 3:30-4:30 ET
    - SSWR Water Research Webinar Series-Water Reuse and Reclaimed Water with Expert Panel Discussion: Wednesday, October 31, 2-3:30

Faces of ORD: NRMRL's Toby Sanan

In the Lab:

Helping States and Tribes Use Multiple Sources of Water Monitoring Data

This week, NHEERL'S Tony Olsen will present at the Integrated Spatial Design and Analysis Workshop in Portland, Oregon. Dr. Olsen's research is addressing how to use design-based estimation techniques to help integrate monitoring and survey data from different sources. These approaches will help states and tribes better integrate the National Aquatic Resource Surveys data with available data.

NHSRC Researcher Presents at the Region 5 Laboratory Directors' Meeting

Last week at the request of Region 5, NHSRC's Dr. Stuart Willison presented his research on surface wipe sampling and analysis for indoor pesticide misuse cases at its Laboratory Directors' Meeting. Attendees included representatives from the EPA Regions, Program Offices, and state agencies (IL, IN, OH, MN, WI, MI). The presentation highlighted the effects of wipe sampling parameters (e.g., wipe sampling materials) on recoveries of pesticides from indoor surfaces. Through this meeting, EPA Regions, state agencies and labs will begin to better understand the results they obtain during pesticide misuse incidents and develop effective pesticide sampling and analysis methods.

ORD Assisting the City of Greensboro, NC with PFAS

On September 27, NRMRL's Tom Speth, Marc Mills, and Jonathan Burkhardt participated in a call with representatives from the City of Greensboro, NC including staff from the Water Resources Department. In 2014, the city detected PFAS in their local watershed and began a full watershed investigation. Historically, there have been a few locations where aqueous film-forming foam (AFFF) from firefighting was discharged to the environment and subsequently entered the city's watershed. During the call, the City provided an overview of their investigation, monitoring efforts, and drinking water treatment approaches (including granular activated carbon) for PFAS and discussed opportunities for partnership and technical support from EPA. Tom and Marc provided a summary of EPA's ongoing research for PFAS methods and treatment technologies. NRMRL has now expressed interest in obtaining data from the monitoring program and wastewater samples from the city for future research.

Coordinating with Ohio EPA on PFAS

Last week, NRMRL's Tom Speth, Sandhya Parshionikar, Darren Lytle, and Jonathan Pressman met with staff from Ohio EPA. At the meeting, which was requested by Ohio EPA, information was exchanged on work related to PFAS chemicals. Ohio EPA is willing to share their occurrence data on PFAS chemicals, which ORD may use for modeling purposes.

Update on Technical Assistance for Lead in Newark, NJ

On October 10, NRMRL's Mike Schock participated in a call with staff from Regions 2 and 5 and the New Jersey Department of Environmental Protection (NJDEP). Region 5 shared lessons learned from the drinking water lead contamination incident in Flint, MI, how they handled the volume of incoming citizen inquiries, and how Region 5 manages Lead and Copper Rule action level exceedances. In addition, they discussed certifications for pitcher and point-of-use filters and assisting residents with filter installation. Last week, Mike Schock, Darren Lytle, and Sandhya Parshionikar participated in another call with Regions 2 and 5, NJDEP, and OW to answer technical questions and discuss ORD's comments on the corrosion control plans for Newark.

American Water Works Association (AWWA) Interview Published

NRMRL's David Wahman was featured in an *AWWA Connections Story* titled "Journal AWWA Author: New Take on Chlorinated Cyanurates," recently published on AWWA's website. In the story, David discusses his recent *Journal AWWA* article, "Chlorinated cyanurates: review of water chemistry and associated drinking water implications," which summarizes existing knowledge on water chemistry of chlorinated cyanurates and practical implications for their use in drinking water.

Technical Meetings at Cyprus Tohono Mine Superfund Site in AZ

Last week, at the request of Region 9, NRMRL's Randall Ross met with representatives of the Tohono O'odham Nation, Cyprus Tohono Corporation and their consultants, Bureau of Indian Affairs, Bureau of Land Management, and Region 9 to discuss specific issues related to a feasibility study at the Cyprus Tohono Mine Superfund site. The primary issues of concern are related to the fate and transport of sulfate, perchlorate, and uranium in the basin fill aquifer. NRMRL has been providing technical support for groundwater contamination issues at the Superfund site, which is the location of a century old copper mine and processing facility.

Market Allocation (MARKAL) Project Discussions and Lecture in NY

Last week, NRMRL's Ozge Kaplan and Mine Isik (ORISE participant) met with stakeholders to discuss development of the New York City (NYC) community-scale MARKAL energy systems database. Ozge is working with Region 2 and City University of New York (CUNY) on these efforts. The database will help decision-makers find integrated approaches to energy and water

infrastructure planning. Ozge also met with the New Jersey Department of Environmental Protection's Regional Greenhouse Gas Initiative to gather stakeholder interest in development and application of ORD's energy systems modeling capabilities to their emerging energy planning. She also provided a briefing on the community-scale MARKAL database to the NYC Department of Citywide Administrative Services, NYC Mayor's Office of Sustainability, and the C40 Cities Network.

Critical Review of Eutrophication Models for Life Cycle Assessment

NRMRL's Briana Niblick, Andrew Henderson, and Jane Bare, NERL's Heather Golden and Ellen Cooter, and NHEERL's Jana Compton published an article in *Environmental Science & Technology*. The article, "Critical Review of Eutrophication Models for Life Cycle Assessment," discusses the underlying fate and transport models used in life cycle assessment (LCA). The review identifies gaps in existing LCA eutrophication modeling methods, especially related spatial and temporal factors, and identifies opportunities to link improved LCA eutrophication methods with existing EPA nutrient modeling techniques. The review resulted in a criteria-ranked matrix of recommendations for future development of the eutrophication potential impact category in LCA.

Nutrient Removal and Resource Recovery from Wastewater

NRMRL's Cissy Ma and Diana Bless, NERL's Jay Garland and Michael Nye, and coauthors published the paper, "Effect of Nutrient Removal and Resource Recovery on Life Cycle Cost and Environmental Impacts of a Small-Scale Water Resource Recovery Facility," in a *Sustainability* special issue: *Sustainable Wastewater Treatment Systems*. This paper showcases an upgrade of a community wastewater treatment plant in which transformative technologies employing the resource recovery concept can be applied to achieve nutrient removal while generating steady annual revenue and a reasonable payback period for the initial capital cost.

NRMRL Research Cited in Australia/New Zealand Water Quality Guidelines

NRMRL's John Carriger's research on the use of Bayesian networks in environmental decision-making ("Bayesian Networks Improve Causal Environmental Assessments for Evidence-Based Policy," published in *Environmental Science & Technology*) was cited in the Australia/New Zealand Water Quality Guidelines. The purpose of these guidelines is to facilitate the productive and sustainable use of water resources while maintaining the biological communities and ecological processes that the resources support. Australia and New Zealand management and monitoring programs consider water, sediment and biological indicators in an integrated weight-of-evidence process.

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Association between Phthalate Exposure and Metabolic Syndrome in Adolescents

On October 5, *International Journal of Hygiene and Environmental Health* published "Urinary phthalate metabolites and metabolic syndrome in U.S. adolescents: Cross-sectional results from the National Health and Nutrition Examination Survey (2003–2014) data by NERL's Symielle

Gaston (ORISE) and Nicolle Tulve. Phthalates are chemicals used in the manufacture of consumer products such as plastics, insect repellents, synthetic fibers, lubricants, and cosmetics. Exposure to phthalates among adolescents has been linked to increased risk for metabolic syndrome, a medical condition also known as insulin resistance syndrome. This study investigated the association between the concentrations of phthalate metabolites in urine and metabolic syndrome in adolescents using data from the National Health and Nutrition Examination Survey. The study found that, among adolescents, there is a suggestive positive association between the presence of the phthalate metabolite MnBP and metabolic syndrome and that further research is needed on the relationships between phthalate exposures, metabolic syndrome, and potential interactions with socioeconomic factors.

2018 CMAS Conference

The 2018 Community Modeling and Analysis System (CMAS) Conference is taking place this week in Chapel Hill, N.C. Many ORD scientists will be participating. The CMAS Conference promotes positive interactions between air quality model developers and air quality model users to improve the scientific capability and communication within the community. At the meeting, NERL staff will unveil a beta release of the Community Multiscale Air Quality (CMAQ) Modeling System, version 5.3. CMAQ 5.3 represents a major scientific upgrade to the current public model. ORD will also have demonstrations at the EPA booth, including a preview of the Next Generation Air Quality Model on the latest release of the Visual Environment for Rich Data Interpretation (VERDI) software and a the Detailed Emissions Scaling, Isolation, and Diagnostics (DESID) in CMAQ.

The Decay of Fecal Indicator Bacteria and MST Markers

In September, *Science of the Total Environment* published online "Extended persistence of general and cattle-associated fecal indicators in marine and freshwater environment" by NERL's Asja Korajkic and Brian McMinn, NRMRL's Mano Sivaganesan and Orin Shanks, and coauthors. Fecal contamination of recreational waters with cattle manure can pose a risk to public health. Fecal indicator bacteria can be used to help assess recreational water quality and microbial source tracking markers can help identify pollution sources. This study investigated how water type (i.e., fresh or marine) and environmental parameters such as the microbiota present and amount of sunlight affect the decay of these tools. The findings suggest that excluding microbiota and/or sunlight usually slowed the decay but the effect was minor and limited to select targets.

A Look at Where Marine Natural Products Were Derived from Coral Reefs

The *Journal of Natural Products* published "Spatial Distribution of Collections Yielding Marine Natural Products" by NERL's Peter Principe and NHEERL's William Fisher. The benefits provided by coral reefs include shoreline protection, habitat, tourism, recreation and marine natural products. This study looked at the relationship between marine natural products and the characteristics and condition of coral reef ecosystems by tracking the location and identity of coral reef organisms that have provided pharmacological products. The results are a synopsis and appraisal of years of study and exploration by the marine natural product community. However, the authors note that better understanding the benefits of marine natural products discovery will depend on improved reporting of collections, collection dates and locations.

Region 5 Annual Air Toxics Risk Assessor Meeting

Region 5 invited NCEA's Andrew Kraft to present his neurotoxicity research at their Annual Air Toxics Risk Assessor Meeting. Region 5 state risk assessors from divergent backgrounds meet annually to address common issues related to toxicology, air monitoring, air dispersion

modeling, emission inventories, and risk communication. Topics related to ethylene oxide and PFAS are also on the agenda.

The Cleaner Air Oregon Hazard Index Technical Advisory Committee

Today, NCEA's John Vandenberg will participate in a meeting of the Cleaner Air Oregon Hazard Index Technical Advisory Committee in Portland, Oregon. The committee will focus on evaluating air toxics that may cause developmental (prenatal/postnatal) and other severe health effects; what a "severe" health effect is, and any other standards or criteria to be used in the evaluation; and advising Department of Environmental Quality on the selection of air toxics that should be regulated. The DEQ in turn will propose rules to the Environmental Quality Commission in May 2019. The committee will meet again in December 2018.

People, Prosperity, and the Planet (P3) Team at Michigan Technological University

The P3 team at the Michigan Technological University created a YouTube video on their EPA-funded P3 project, Separation and Recovery of Individual Components from the End-of-Life Lithium-ion Batteries. The project aims to apply a 100-year-old mineral processing method to solve the looming 21st-century problem of how to economically recycle lithium ion batteries. The team is investigating the feasibility of a combination of gravity concentration and froth flotation as a new separation system that can meet three principles of sustainability for battery recycling. The video also includes a footage from their participation at the 2018 P3 Phase I National Student Design Expo.

Grantee Publication on Background Ozone

Background ozone concentrations are increasing and show substantial inter-annual variability. STAR Grantee Arlene Fiore (#R835878) and colleagues analyzed observational data and a suite of modeling simulations for 2004-2012 to examine which emission sources are influencing average- vs. high-O_3 days and days with the highest model bias, including the contribution of background ozone, i.e., ozone in the absence U.S. anthropogenic emissions. The results indicate that a 3-year averaging period, which is used to assess compliance with the National Ambient Air Quality Standard for ozone, is not long enough to eliminate inter-annual variability of background ozone on the highest observed ozone days.

Grantee Publication on PM Exposure and Metabolic Changes in Commuters

STAR grantee Jeremy Sarnat (#R834799) of the Emory University/Georgia Tech Clean Air Research Center and colleagues used advanced high-resolution metabolomics (HRM) analysis to examine heart, lung, and inflammation-related biological endpoints in plasma (blood) samples from car commuters in Atlanta, Georgia. Acute exposures to traffic-related air pollutants were found to be associated with broad inflammatory response, including several traditional markers of inflammation. The study shows that HRM can be useful for understanding the metabolic pathways by which traffic-regulated pollution affects health.

E-Enterprise Meeting

This week, ORD's Chris Robbins and Lisa Matthews will participate in EE2018–the E-Enterprise National Meeting– in Addison, TX. The theme is *Shared Stories, Shared Services, Shared Successes*. Today, Chris Robbins will introduce the EPA Research Website and Science Inventory, a searchable catalog of all EPA's published research, to this audience. EE2018 aims to continue promoting integrated conversations around process improvement, program modernization, advanced technology, and data management.

In the Office:

Combined Federal Campaign Kick-off

Today, the kick-off for EPA's 2018 Combined Federal Campaign (CFC) took place from 11-12 ET in the Rachel Carson Green Room in DC. If you missed the live event, check the EPAtv On-Demand site on Wednesday, Oct. 24 for a recording. The CFC theme will continue to be "Show Some Love." The online giving portal is available now and as in 2017, allows you to donate dollars and volunteer time. Note: you may have trouble using Internet Explorer to view the portal. For information on donating, please contact your office or regional coordinator or the EPA CFC Manager Sharon Clark.

Accolades:

2017 National Honor Awards

- Jace Cujé (OSP) and Brian Schumacher (NERL) received an EPA Gold Medal for Exceptional Service for outstanding contributions to the development, proposal and promulgation of the regulatory action that added a subsurface intrusion component to the Superfund Hazard Ranking System.
- Steve Dyment (OSP) received an EPA Gold Medal for unprecedented and innovative efforts to address lead hazards at the Colorado Smelter Superfund Site through removal and remedial authorities and the best available science.

Gardener Recognition Award

NRMRL's Steve Rock received the 2018 Gardner Recognition Award and Horticultural Award of Special Commendation by the Cincinnati Horticultural Society for his work at the Lighthouse Community School gardens. Through the 500 Gardens in Madisonville program, Steve has worked with the school to establish food and flowers gardens, rain barrels, compost and worm bins, chickens, and aquaponics.

Publons Peer Review Award

NRMRL's Raj Varma won the Publons Peer Review Award for being one of the top 1% of reviewers for the journal *Chemistry.* Raj won this award for his contributions to scholarly peer review and editorial pursuits internationally. He demonstrated an outstanding expert commitment to protecting the integrity and accuracy of published research in this field.

OAR Honor Award for the Total Atmospheric Deposition Data Fusion Team

On October 10, OAR announced that the Total Atmospheric Deposition Data Fusion Team is receiving an EPA National Honor Awards for 2017. The Science Achievement Award for Air Quality is being awarded to the team for its leadership in the development and application of a data fusion measurement-modeling approach to estimating total atmospheric deposition for ecological assessments. Among the members of the team are ORD's Donna Schwede (NERL) and John Walker (NRMRL).

In the News:

EPA Announces Update to Smoke Sense App

Last week, EPA announced its update to the Smoke Sense mobile app. The app can help users learn about air quality conditions during a wildfire and how to protect their health from smoke. The Smoke Sense app is part of a research study to understand the extent to which smoke from wildfires impacts human health and productivity; discover how people protect their health during smoke exposure; and develop effective strategies to communicate risks from smoke exposure. The app provides current and forecasted air quality using the Air Quality Index (AQI), and maps of fire locations and smoke plumes. New features in the 2018 update include:

- Time of last measurement of two air pollutants present during wildfires—fine particulate matter and ozone;
- Access to the most current information about individual fires;
- Maps of hourly forecasts of smoke and ozone across the continental U.S.;
- Smoke Smarts module to test your knowledge of wildfire smoke exposure; and
- Upgraded graphics and streamlined tutorials and information buttons.

The Smoke Sense App can be downloaded for free in the App Store and Google Play. EPA hosted a public webinar about the 2018 update today from 2-3 EDT.

In the Community:

EPA-RTP STEM Outreach Program

Today, NRMRL's Chris Nietch and Christina Bennett-Stamper will give a tour of the Experimental Stream Facility to undergraduate students from Northern Kentucky University. This is an annual for students interested in environmental careers, where they can observe a working ecology laboratory. ESF staff will discuss the relevance of watershed management research, the role of small stream ecosystems, and the relevance of the mesocosm studies conducted at the ESF. The tour will involve 20-30 students and two faculty members.

EPA-RTP STEM Outreach Program

- Yesterday, the program presented an ecosystem services activity to 5th grade students at St. Michael's Catholic School in Raleigh.
- Today, the program will provide a keynote speaker for the Partnership for Global Sustainability's (PGS) International Workshop for Global Sustainability; present hands-on activities to students at Durham's Environmental Education Field Day at W.G. Pearson Elementary School in Durham; and today through tomorrow, NERL's Kelly Witter will lead STEM Education training for Region 1 employees. In addition, EPA will spend time on October 24 and 25 at a Boston middle and high school to teach the students about energy through the EPA-developed activity, GENERATE: The game of energy choices.
- Tomorrow the program will host an EPA booth at the Raleigh's Outreach Expo at the North Carolina Association for Biomedical Research (NCABR) 2018 Bridging the Gap Conference; lead its fourth EPA Environmental Club for 3rd-5th graders at E.K. Powe Elementary School in Durham; lead a hands-on activity at W.G. Pearson Elementary School in Durham; and give a presentation about sustainability in the 21st century to the Sustainability Project Leaders, a group of high schoolers attending the North Carolina School of Science and Mathematics (NCSSM) in Durham.
- On Thursday, the program will present an activity about water quality to middle school students at Holly Grove Middle School in Holly Springs; lead its sixth biweekly hands-on

STEM activity for the afterschool program at Holt Elementary School in Durham; participate as career role models in an afterschool program for African American males at Powell Elementary School in Raleigh; and lead its second monthly hands-on STEM activity of the school year for a group of 4th graders at Green Elementary School in Raleigh.

Faces of ORD: NRMRL's Toby Sanan

Name: Toby Sanan
Job/Position: Chemist
L/C/O or Program: ORD/NRMRL/WSD/DWSB in Cincinnati

1. When did you start at EPA? I started at the EPA as an NRC Post-Doctoral Fellow in 2011.

2. What's the most interesting thing about your job? I get to work on a number of projects and collaborate with researchers both within and outside the Agency. To date I've worked on cyanotoxins, pesticides, and now perfluoroalkyl substance research. I've been able to participate in a variety of high profile areas of research.

3. What's the most interesting thing in your workspace? My mass spectrometers; they're big, heavy instruments that hum and vibrate all the time, and we use them to measure toxins and contaminants in samples.

4. What's your favorite thing to do (besides come to work)? Probably going for hikes in the woods with my boys (4 and 7) and my wife. Especially in the fall when the leaves are turning.

5. What's your favorite lunch spot? Ambar, an Indian restaurant in Clifton, Ohio. It's fast and they have a great Nav Rattan Korma.

6. **If you could have one superpower, what would it be?** Probably the ability to go without sleep, because I feel like I always have more things to do when I go to bed.

7. What is your favorite movie? Serenity, directed by Joss Whedon.

8. Describe any steps you take in your daily life to protect the environment.
I try and use reusable containers for my coffee and food at work. I live a block from a Tesla

dealership so that's a tempting prospect when they become more affordable as a replacement for my aging Civic.